

Claims

1. An apparatus comprising:

a casing that surrounds an axis to define a cavity that has axially front and rear ends, said casing being configured to conduct a mixture of a liquid and a contaminant through said cavity from said front end to said rear end;

a porous basket structure located within said cavity for holding coalescing media and having a top opening, said basket structure being configured for the liquid to flow through said top opening into said basket structure, through the coalescing media, and outward through said basket structure in a vertical direction and a horizontal direction; and

a constraining structure, located in said cavity, that constrains the liquid flowing through said cavity from said front end to said rear end to flow through said top opening into said basket structure when the liquid is below a predetermined level.

2. The apparatus of claim 1 wherein said horizontal direction is any direction extending from within said basket and directed forward, rearward or sideways.

3. The apparatus of claim 1 wherein said horizontal direction is perpendicular to said axis.

4. The apparatus of claim 1 wherein said basket structure is configured for the liquid to flow out of said basket structure also in a second horizontal direction opposite said horizontal direction.

5. The apparatus of claim 1 wherein said apparatus has an installed orientation in which said axis is horizontal.

6. The apparatus of claim 1 wherein said basket structure comprises a screen extending downward from said top opening.

7. The apparatus of claim 1 wherein said basket structure comprises a porous bottom wall, a porous front wall, a porous rear wall, and two opposite porous side walls.

8. The apparatus of claim 1 further comprising coalescing media in said basket structure.

9. The apparatus of claim 8 wherein said media comprises coalescing balls.

10. The apparatus of claim 1 wherein said constraining structure comprises a lower baffle in front of said basket structure configured to block the liquid from bypassing said top opening from the side or from below, and said constraining structure further comprises an upper baffle rearward of said basket structure configured to block the liquid from bypassing said top opening from above when the liquid is below a predetermined level.

11. The apparatus of claim 10 wherein said upper baffle has a bypass flow opening through which the liquid can bypass said top opening when the liquid is above the predetermined level.

12. An apparatus comprising:

a casing that surrounds an axis to define a cavity, said casing having an installed position in which said axis is horizontal and said cavity has a top, a bottom, and axially front and rear ends, said casing being configured to conduct a mixture of a liquid and debris through said cavity from said front end to said rear end;

front and rear walls capping said casing at said front and rear ends;

a horizontal outlet tube extending axially through said rear wall and having a horizontal outlet channel with a bottom; and

a transversely-extending weir extending upward from said bottom of said cavity, said weir having a horizontal top edge located above said channel bottom and spaced below said top of said cavity, and further having fluid flow apertures below said channel bottom.

13. The apparatus of claim 12 wherein said apertures are arranged in horizontal mutually-overlapping rows, said apertures of one row being separated from each other and horizontally offset from the adjacent apertures of the another row.

14. The apparatus of claim 12 wherein said weir is free of fluid flow apertures below a level halfway between said bottom of said cavity and said bottom of said outlet channel.

15. The apparatus of claim 12 further comprising a vertical outlet tube within said cavity extending downward from said horizontal outlet tube and having an intake opening below said horizontal outlet tube.

16. The apparatus of claim 12 further comprising a horizontal inlet tube extending axially through said front wall and having a horizontal inlet channel located above said bottom of said outlet channel.

17. The apparatus of claim 16 further comprising a vertical inlet tube within said cavity extending downward from said horizontal inlet tube and having a discharge opening below said bottom of said horizontal channel.

18. An apparatus comprising:

a casing surrounding an axis to define a cavity and having an installed position in which said axis is horizontal and said cavity has a top, a bottom, and axially front and rear ends, said casing being configured to conduct a mixture of a liquid and a contaminant through said cavity from said front end to said rear end; and

a coalescer, located in said cavity, comprising an inclined stack of corrugated plates extending rearward and upward, each plate having corrugations extending rearward and upward.

19. The apparatus of claim 18 wherein each plate has bottom and top edges, and said corrugations extend fully from said bottom edge to said top edge.

20. The apparatus of claim 18 further comprising an upper baffle extending from said coalescer upward to said top of said cavity, said upper baffle being configured to block the mixture from bypassing said coalescer when the liquid is below a predetermined level, and said upper baffle having a bypass flow opening through which the liquid can bypass said coalescer when the liquid is above the predetermined level.